

DOCUMENT RESUME

ED 063 931

JC 720 162

AUTHOR Connolly, John J.; Sepe, Thomas
TITLE Do Students Want Individualized Instruction?
INSTITUTION California Univ., Los Angeles. ERIC Clearinghouse for
Junior Coll. Information.
REPORT NO Topical Pap-34
PUB DATE Jul 72
NOTE 32p.
AVAILABLE FROM Clearinghouse for Junior Colleges, 96 Powell Library,
University of California, Los Angeles 90024 (Limited
supply available free of charge)

EDRS PRICE MF-\$0.65 HC-\$3.29
DESCRIPTORS *Conventional Instruction; Independent Study;
*Individualized Instruction; Instruction; *Junior
Colleges; *Student Attitudes; Student Needs;
*Teaching Methods; Teaching Models

ABSTRACT

This topical paper examined students' views on individualized instruction versus the traditional approach. The purpose of the study was: (1) to measure student acceptance of the concept of individualized instruction; (2) to identify positive and negative factors of individualized instruction as perceived by students; and (3) to identify the characteristics of students selecting individualized and traditional methods. Random samples of students from Harford Community College (Maryland) participated in the first phase of the study and samples of students from three other local colleges were added to the second phase. The results of these studies indicated that only 50% of the students sampled preferred the individualized model to the traditional approach. While a majority of the students indicated a preference for almost all the characteristics of individualized instruction including self-pacing, emphasis on the individual, and grading based on the achievement of objectives, they preferred teacher, rather than student, control of the learning situation. The students' negative reaction to the concept of student responsibility for learning may have been strong enough to result in the rejection of the individualized instructional model despite its preferred characteristics. A section on implications of the study for individualized instruction is included. (RG)

ED 063931

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRO-
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIG-
INATING IT. POINTS OF VIEW OR OPIN-
IONS STATED DO NOT NECESSARILY
REPRESENT OFFICIAL OFFICE OF EDU-
CATION POSITION OR POLICY.

DO STUDENTS WANT
INDIVIDUALIZED INSTRUCTION?

John J. Connolly

Thomas Sepe

ERIC Clearinghouse for Junior Colleges

Graduate School of Education and the University Library
University of California
Los Angeles 90024

Topical Paper No. 34

July 1972

UNIVERSITY OF CALIF.
LOS ANGELES

AUG 2 1972

CLEARINGHOUSE FOR
JUNIOR COLLEGE
INFORMATION

JC 720 162

This Topical Paper was prepared pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

TOPICAL PAPERS

1. A Developmental Research Plan for Junior College Remedial Education. Jly 1968. ED 022 479.
2. A Developmental Research Plan for Junior College Remedial Education; No. 2: Attitude Assessment. Nov 1968. ED 026 050.
3. Student Activism and the Junior College Administrator: Judicial Guidelines. Dec 1968. ED 026 039.
4. Students as Teachers. Jan 1969. ED 026 999.
5. Is Anyone Learning to Write? Feb 1969. ED 030 422.
6. Is It Really a Better Technique? Mar 1969. ED 030 410.
7. A Developmental Research Plan for Junior College Remedial Education; No. 3: Concept Formation. Aug 1969. ED 032 072.
8. The Junior College in International Perspective. Jan 1970. ED 025 417.
9. Identifying the Effective Instructor. Jan 1970. ED 035 416.
10. Financing Higher Education: A Proposal. Feb 1970. ED 037 206.
11. The Person: A Conceptual Synthesis. Mar 1970. ED 037 219.
12. The Position Papers of Black Student Activists. Sep 1970. ED 042 453.
13. Case Studies in Multi-Media Instruction. Oct 1970. ED 044 098.
14. The Laws Relating to Higher Education in the Fifty States, January 1965-December 1967. Oct 1970. ED 044 097.
15. Nationwide Pilot Study on Articulation. Dec 1970. ED 045 065.
16. The President's Reaction to Black Student Activism. Jan 1971. ED 046 390.
17. The Dynamic Interaction of Student and Teacher. Feb 1971. ED 046 395.

18. Directions for Research and Innovation in Junior College Reading Programs. Feb 1971. ED 046 396.
19. Some Philosophical and Practical Concepts for Broadening the Base of Higher Education in Virginia. Apr 1971. ED 049 729.
20. Skill Development in Junior College Reading Programs. May 1971. ED 048 859.
21. Community College Reading Center Facilities. May 1971. ED 051 792.
22. Black Studies as a Curriculum Catalyst. May 1971. ED 050 709.
23. Exemplary Practices in Junior College Reading Instruction. May 1971. ED 050 710.
24. Training Faculty for Junior College Reading Programs. May 1971. ED 050 711.
25. Extending Environmental Research to the Community College. Aug 1971. ED 053 724.
26. A Student Volunteer Services Bureau. Aug 1971. ED 053 719.
27. The College of the Whole Earth. Oct 1971. ED 055 588.
28. The Professional President: A Decade of Community Junior College Chief Executives. Jan 1972. ED 058 881.
29. The Financial Crisis in the Community College. Feb 1972. ED 058 873.
30. The Practitioner Views Institutional Research. Feb 1972.
31. After the Open Door: An Approach to Developmental Education. Mar 1972.
32. Group Counseling of Minority and Low-Income Women Students: A Model Program for Community College Educators. Mar 1972.
33. The Who, What, Why of Instructor Evaluation. Apr 1972.
34. Do Students Want Individualized Instruction? Jly 1972.

Copies of back issues are available (by ED number) from ERIC Document Reproduction Service, P.O. Drawer O, Bethesda, Md. 20014. Hard copy (HC) is \$3.29 per units of 100 pages or less; microfiche (MF) is \$.65 per title, regardless of size. Payment must accompany orders of \$10.00 or less and should include sales tax where applicable.

CONTENTS

I. INTRODUCTION.....	1
II. THE STUDY.....	6
Results: Phase I.....	9
Results: Phase II.....	14
III. DISCUSSION.....	16
Implications for Individualizing Instruction.....	18
TABLE I CHOICE OF MODEL.....	9
TABLE II CATEGORIES OF STUDENT RESPONSES.....	11
TABLE III RESPONSES TO FORCED CHOICE.....	15
BIBLIOGRAPHY.....	23
APPENDIXES.....	25

DO STUDENTS WANT INDIVIDUALIZED INSTRUCTION?

I. INTRODUCTION

The concept of individualized instruction is having a definite impact on contemporary education. By raising some pertinent questions in both theory and practice, it has stimulated a reexamination of the very foundations of our educational system. The results of this introspection are expressed in the concerns of the educational community for the changing process and goals of education and in the new roles assumed by its professionals.

What is this disruptive force in education? In a paper presented at the annual meeting of the American Educational Research Association, Heathers provided an encompassing and accurate description of what individualized instruction is and what it is not.

Education is individualized . . . as the learning goals an individual pursues, and the means whereby he works toward them, are selected for and by him. Individualization is not limited to independent learning or learning in a tutor-student dyad. Depending on the learning goal and learner characteristics, individualized education also can occur in group contexts. Individualization is fostered through emphasizing student involvement in choosing and conducting learning activities. Managing individualized instructional programs in schools depends greatly on student self-direction accomplished either through using programmed materials or through students' developing competencies in selecting, planning, and conducting learning tasks (11).

From definitions such as this, one is able to understand the reasons for the impact of this concept. The characteris-

tics of individualized instruction cited by Heathers are quite distinct from those of traditional, group-oriented instructional methods. It is these distinctions that must be examined to understand the full force of this alternative concept of instruction. This paper notes certain existing differences between the two instructional approaches, cites selected literature, describes a study dealing with various perceptions of the differences, and, finally, points to certain implications that may be drawn from both published reports and this specific investigation.

Traditional versus Individualized Forms of Instruction

The most observable difference in the two systems is in their emphasis, the one approach focusing on the individual learner, and the other on the learner in a group. This seemingly obvious distinction in orientation has far-reaching effects on the learning environment and places very different requirements on the instructor and the student. Individualized instruction requires that the learning outcomes--the goals to be achieved by the learner--be specified in detail prior to instruction. While both instructional modes may establish objectives, the essential difference is the greater specificity required with individualized instruction.

This difference in degree of specificity also applies to the area of structure in the learning process. In the individualized approach to instruction, the fact that outcomes are clearly defined in advance makes it possible to design more distinct learning strategies to achieve these goals. In the traditional mode the learner is given general course objectives and provided minimal guidance along pathways toward their attainment.

In order to accommodate personal differences among learning styles and preferences, the individualized learning mode provides a variety of alternative learning pathways, relying largely on programmed materials supplemented by small group discussion. The group-oriented, traditional mode

typically uses two routes for all students--the lecture and textbook readings.

Whereas in the traditional mode of instruction the course material and textbook information (pathways) are organized according to pedagogical theory and/or logical sequence of content, the pathways offered by the individualized instructional mode are a product of an empirical cyclic process. The materials are tested on students, revised on the basis of test result evaluation, and tried again until the instructor is satisfied that they produce the desired levels of student proficiency. In the traditional mode of instruction this type of feedback-correction cycle is more likely to occur on an infrequent, informal basis, and modifications of instructional materials typically result from intuitive assessments.

Other Comparisons

There are other distinctions between the two systems. For example, individualized instruction differs from the traditional mode in its removal of rigid time constraints; since it adheres to the concept of individual differences, it also acknowledges that students have personal learning rates and learning styles. Mastery of the material--i.e., the attainment of specific objectives--is therefore paramount, and the time required to accomplish the task of lesser importance. For this reason individualized instruction is not confined to learning within an artificial time-block sequence of units, but is oriented to student mastery-progression.

Differences are also apparent in the role of the instructor. In the individualized mode the instructor no longer assumes the "fountainhead" role but is instead a tutor, a resource to students to be used as needed, and a manager of the learning process. The emphasis is on measurable student learning rather than on teacher activity or performance.

Equally important differences exist in the roles students assume in these two instructional modes. The more traditional,

passive role of the student as receiver of information and infrequent controller of the instructional process varies from his role in the individualized mode where he is expected to be an active participant both in the learning process and in the control and selection of the instruction received.

These differences concur with those in the learning environment. For the most part the environment of the individualized approach mode is highly unstructured, placing the responsibility on the student to set his own pace, schedule his own time input, and select the instructional method he wishes to use. What is structured are the individual learning pathways leading to specified goals, sequenced and reinforced in such a way as to shape the student's behavior toward the predetermined outcomes.

The traditional instructional environment is organized counterpoint to the individual mode. The student is provided with external cues of expectations relating to output, number of required class meetings, length of classes, examination dates, reading assignments, and, to a limited degree, the course objectives. The methods or pathways to be used for assimilating the course material are not specified and he may rigidly do daily assignments or cram for examinations, learn from the textbook or the lecturer, or both. Given the instructional resources provided by the teacher with a minimum of guidance, the student is expected to learn any way he sees fit.

Grading procedures also differentiate the two approaches. The traditional grading system--A, B, C, D, F--is frequently seen as punitive in nature because a student is punished for failure to learn within specified time limits. In contrast, the nonpunitive grading systems used with individualized instruction do not punish. Such systems typically have four grades: A, B, C, and I (or X or other symbol). A student receives an A, B, or C when he achieves a predetermined level of subject mastery. He receives an I when he has not achieved the mastery level and usually has an undetermined

time period to do so and receive a grade. Another grading pattern common to this mode is "Pass or No Credit."

The nonpunitive grading system focuses on learning, whereas the traditional system shifts its emphasis from learning to grading. If students do not learn in a traditional system, they are given D's or F's and the responsibility of the instructor ends. In the nonpunitive system it is the instructor's responsibility to bring the student up to the minimum mastery level, whether it takes more or less than the standard 15-week semester.

The Literature

Given the individuality of students, the contrasting characteristics of the two instructional modes, and the resulting differences in the roles assumed by students, should there then not be varying degrees of learner acceptance of and success in these modes? Current research provides some insights into this question. For example, Bloem (4) states that "there is evidence that some students can learn quite well through independent learning efforts while others need highly structured teaching-learning situations." Glazer (10) also discusses the idea that individualized instruction requires there be different ways for people to learn. Similarly, Jacob (12) points out that "some students react very negatively to a more permissive teaching technique," a position that is supported by a number of related research studies. Ashmus and Haigh (1), in a study of student preferences for directive and nondirective classes, found that almost an equal number chose each method. Although the students did not differ significantly in intelligence or grade averages, those preferring nondirective courses displayed greater flexibility, self-insight, and ability to cope with ambiguity.

Other investigators have looked at success in terms of academic achievement. Examining ninth-grade students in an independent study program, Bernstein (2) concluded that creativity, low need for structure, and ability to self-direct

and be responsible for one's own learning were significant predictions of success. Macomber and Siegel (16) found that students who initially held favorable attitudes toward a mode of instruction were somewhat superior in achievement than those who did not. Davis (8) found that with content held constant, the form of presentation will give an advantage to students with aptitude congruent with the mode of presentation. Likewise Kropp, Nelson, and King (14) suggested that achievement can be enhanced by assigning instructional materials known to be related to ability patterns of students.

Wispé (18) found "personality-insecure" students had an unfavorable attitude toward permissive teaching methods, while "independent" students desired more permissive methods regardless of the method used in class. Bigelow and Eghert (3), using the California Psychological Inventory, reported that students with high social needs were less satisfied with independent study, while intellectual efficiency and responsibility were traits pertinent to success. Personality variables have also been found to be related to achievement in programmed instruction and in computer-assisted instruction by a number of researchers (9:334-338; 13:14-17; 15:295-302; 17:169-179; 19:72-77). In summary, research points to the fact that individual students prefer different learning environments. While these preferences do not appear related to cognitive abilities, they do involve the dynamics of personality characteristics.

II. THE STUDY

Although there has been research on the total concept of individualized instruction, most investigations have taken place ex post facto, after a learning system has been implemented. Evaluation has centered on courses, instructors, specific materials, and combinations of all three, but not on the concept itself. What would be student reactions to the concept rather than to a specific application?

It can be safely assumed that all students have experienced, in some form or other, "traditional" instruction. Yet this same assumption cannot be made regarding individualized instruction. Only a comparatively limited number of students have been exposed to it, and fewer of them to more than one of its forms. This inequity in student exposure exists both for the assessment of student attitudes toward individualized instruction and for the actual implementation of such a program.

The question of students' initial preference for an instructional concept (versus an application of the concept) poses an interesting and seemingly endless series of questions. For example, given the opportunity to choose between the divergent instructional modes, would student preferences be sufficiently polarized to warrant offering a potpourri of modes? Or would they be sufficiently convergent to warrant the offering of a single mode of instruction (be it individual or group oriented)? What characteristics of each mode are most attractive to students? What characteristics would differentiate the students selecting each mode? This study attempts to answer these questions.

Objectives

The purposes of the study were threefold:

- (1) to measure student acceptance of the concept^{*} of individualized instruction
- (2) to identify positive and negative factors of individualized instruction as perceived by students
- (3) to identify the characteristics of students selecting individualized and traditional methods.

^{*} The model of individualized instruction developed for this study and presented to the student sample does not epitomize the theoretical ideal. It is instead an attempt to represent the best of current applications of the theory.

Methods

The study was undertaken in two phases. Phase I focused on answering questions concerning the convergence or divergence of student preferences and the relationship of student characteristics to instructional choice. Phase II investigated student preferences for specific characteristics of each instructional model.

Materials

Since there is no one individualized or traditional mode, models were developed from a synthesis of descriptions provided in the literature. The result was a set of five statements for each (Appendix A, p. 1). The order in which these statements were presented was alternated on the questionnaire to avoid response bias. These models and the questionnaire (Appendix A, p. 2) were used in Phase I of the study.

A second instrument was constructed by manipulating the basic model descriptions for each instructional method to conform with the forced-choice format. The questionnaire contained eight pairs of statements describing the characteristics of comparable areas of each model (Appendix B). The order in which the characteristics appeared in each set was also alternated to avoid response bias. This questionnaire was used in Phase II of the study.

Samples and Procedures

Phase I incorporated two samples. The first sample was randomly selected from students enrolled in the first semester of various two-semester courses at Harford Community College, who were asked to indicate which of the two instructional methods they preferred for the subsequent semester. They were also asked to describe the reason for their selection and to provide basic demographic and academic information (Appendix A, p. 2). The second sample consisted of first-time freshmen who were told during orientation that

English 101, a course they all would be taking, would be taught by two different methods. They were asked to indicate the method they preferred and why, and to provide the same demographic data requested from the first sample. The first sample consisted of 219 freshmen and sophomores, and the second sample, 158 first-time freshmen.

Four Maryland community colleges, including Harford Community College, participated in Phase II of the study. The forced-choice questionnaire was administered to four randomly selected classes at each institution for a total sample of 284 students. The students were asked to select the one characteristic from each pair of items that they preferred to have incorporated into the design of the course in which they were currently enrolled.

Results: Phase I

Although the exact percentage varied slightly, approximately one-half of the combined samples one and two selected each model (Table I). A chi-square test was applied to the selected personal and academic data of these "preference" groups to determine characteristics related to choice of instructional model. No significant relationship (.05 level) was found for age, sex, or quality point index. Nor were such variables as major, grade expected in the course, or the

TABLE I

Sample	Total N	Prefer Traditional Model		Prefer Individualized Model	
		Number	%	Number	%
I	219	107	48.9	112	51.1
II	158	79	50.0	79	50.0
TOTALS		186	49.3	191	50.7

student's perceived academic ability found to be significantly related to instructional preference.

The reasons given by the students in the first two samples for their choice of instructional models were sorted by a panel of three judges, and 14 categories developed (Table II).

Learner versus External Control

Students selecting the traditional option made such comments as: "If left to work alone, I would never keep up;" and "I would probably fare better in a classroom situation since I have a tendency to put off outside work when there's no pressure." In all, 23.2% of the reasons given for selecting the traditional option were of this nature. The label External Control was applied to the answers in this category because they seemed to indicate that the students did not want to direct their own learning--a necessary criterion for individualized instruction--but preferred to have someone else controlling the learning situation.

Students selecting the individualized option made such comments as: "I would like to be as independent as possible while attending college; this seems to be one way of achieving at least part of my goal--learning to stand on my own two feet." Another student added that "I prefer to work more as an individual than in a group--I think that I will accomplish more than with a group."

Grading on Achievement of Objectives versus Competition

Grading by achievement of objectives, more commonly referred to as the mastery approach, is another characteristic of individualized instruction. Students selecting the individualized approach mentioned this factor as the reason for their selection 5.6% of the time, and in so doing noted that "I made this choice simply because the student is graded on his own work;" and "I don't think that people's abilities should be compared to each other--a person should be graded on his own skill."

TABLE II
CATEGORIES OF STUDENT RESPONSES
N=377*

<u>Selected A (Individualized Option)</u>						
<u>Characteristic</u>	<u>Sample I</u>		<u>Sample II</u>		<u>Total</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Grading on achievement of objectives	10	6.4	6	6.1	16	6.3
Learner controlled	9	5.8	4	4.1	13	5.1
Self-pace	64	41.0	40	40.8	104	40.9
Individual emphasis	36	23.1	35	35.7	71	28.0
Variable time input	10	6.4	3	3.1	13	5.1
Learner initiated testing	14	9.0	3	3.1	17	6.7
Instructor as a resource	13	8.3	7	7.1	20	7.9
TOTAL	156	100.0	98	100.0	254	100.0

<u>Selected B (Traditional Option)</u>						
<u>Characteristic</u>	<u>Sample I</u>		<u>Sample II</u>		<u>Total</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Competition	3	4.8	9	8.5	12	7.1
External Control	11	17.7	28	26.4	39	23.2
Group pace	3	4.8	4	3.8	7	4.2
Group emphasis	38	61.3	24	22.6	62	36.9
Set time input	2	3.2	8	7.6	10	6.0
Prescheduled testing	0	0.0	5	4.7	5	3.0
Instructor as learning leader	5	8.1	28	26.4	33	19.6
TOTAL	62	100.0	106	100.0	168	100.0

*multiple responses were counted when given so the total number of responses exceeds the total N of students.

Those students selecting the traditional option frequently mentioned that they sought, or at least preferred, competition. "I enjoy competition," one stated, "an automatic A or B after successful completion is not alluring." Another said "I work better under group pressure competition."

Self versus Group Pacing

Pacing was the second most cited reason (36.6%) for selecting the individualized approach, and students' comments included: "I feel I can work better and faster on my own;" "I feel that I am slower in learning than some of the other students--that is why I picked option A;" and "If I work at my own pace, I think I will learn more." Few students (3.0%) selected the traditional option because of its group pace benefit.

Individual versus Group Emphasis

This dimension of the two approaches is best described by the respondents' replies, with those selecting the individualized option (25%) making such comments as: "I prefer to work more as an individual than in a group. I think that I will accomplish more than with a group;" and "I prefer to learn English independently rather than in a class because I feel I can learn more . . . "

Emphasis on the group was the prime reason for students (26.9%) selecting the traditional option. The two areas their comments focused on were the secure feeling obtained from the group, and group discussion and interaction: "I don't think I'm ready for individual work the first semester --I'd rather see how I'd do with a group first;" "I'm not ready for individual study yet;" "I feel I could work better in a group and would be able to get other students' opinions in different matters;" and "I enjoy working in a group--I could probably learn more."

Variable Time versus Set Time Input

Students selecting the traditional option (4.6%) frequently mentioned work and home commitments that prevented them from putting in too much time, saying, "I work, and need more class time and a limited amount of study;" and "since I am a part-time student and also employed, I feel I will not have the time required to do enough research outside of class."

Interestingly, students selecting the individualized option (4.3%) occasionally based their selection on the same reasoning. "I am employed full time," said one, "and at times have difficulty attending regular classes." Another stated, "I find that with working during the day I don't have time in the evening to do a lot of homework, and I enjoy the thought of being able to more or less set my own pace."

Learner Initiated versus Prescheduled Testing

The testing process was an important reason behind selection of the individualized option (6.0%) and relatively unimportant to students who chose the traditional (2.3%). Students selecting the former stated that "class A also eliminates last minute cramming for final exams;" and "I like the idea of students working on their own level and taking exams when they feel prepared." "I would rather take a few exams instead of a lot" was the response of one student selecting the traditional option.

Instructor as Resource versus Learning Leader

The instructor's role was an important consideration in the choice of 10.8% of the total sample. Four per cent of the students selecting the traditional and 7.1% of those selecting the individualized option cited this reason for their selection.

Those selecting the former perceived the instructor in a dominant "teaching" role, their comments reflecting this

preference: "I feel I can learn more by listening and taking notes;" "I learn more being taught than teaching myself;" and "I usually grasp the idea more readily through lectures rather than on my own."

Students selecting the individualized option preferred working with the instructor on a one-to-one basis. For example, one stated that he felt "a student can learn much more when he moves along at his own rate and can work on a one-to-one ratio with the teacher;" and another, "I would like to work at my own speed and be able to meet with the instructor for individual training."

Results: Phase II

The objective of the study's second phase was to identify student preferences for singular characteristics of each model rather than for the model as a whole. Students were requested to choose between the paired statements, one describing a dimension of traditional instruction, the other the same dimension of individualized instruction.

The results of the students' responses are summarized in Table III. A chi-square test resulted in a $p > .01$, indicating that the distributions are significantly different. Seven of the eight characteristics of the individualized instructional model were preferred over comparable characteristics of the traditional model. The three characteristics of the former receiving the highest number of responses were grading based on achievement of objectives, self-pacing, and emphasis on the individual.

The one characteristic of the traditional model preferred by the majority of students was control of the instructional process external to the student. The two remaining characteristics of that model receiving the highest number of responses were specific time input requirements and the instructor's role as a learning leader.

TABLE III
RESPONSES TO FORCED CHOICE BETWEEN INDIVIDUALIZED AND TRADITIONAL CHARACTERISTICS

N=384

<u>Characteristic</u>	<u>N</u>	<u>%</u>	<u>Totals</u>	<u>%</u>	<u>N</u>	<u>Characteristic</u>
Grading on achievement of objectives	274	71.5	383*	28.5	109	Competition
Learner controlled	167	43.8	381*	56.2	214	External control
Self-pace	269	70.1	384	29.9	115	Group pace
Individual emphasis	252	65.6	384	34.4	132	Group emphasis
Variable time input	233	61.0	382*	39.0	149	Set time input
Learner initiated testing	241	63.8	378*	36.2	137	Prescheduled testing
Instructor as a resource	238	62.5	381*	37.5	143	Instructor as learning leader
Undefined semester length	246	64.1	384	35.9	138	Defined semester length

*reflects non-responses

III. DISCUSSION

As indicated by the results of Phase I, only 50% of the students selected the individualized model, a far smaller percentage than many advocates of this approach would have predicted. When given the choice between singular characteristics of the individualized and the traditional models, the sample chose the former in all cases but one. Respondents preferred the traditional characteristic of teacher control of the learning situation to the individualized characteristic of learner control. In other words, the majority of students preferred all the characteristics of individualized instruction except having the responsibility for learning placed on them. Considering this fact in light of the responses of the first two samples to the entire descriptive models and their rather evenly divided preferences, a number of interesting possibilities emerge.

First, despite the variety of reasons offered for selecting the traditional rather than the individualized model, it is possible that many students were reacting to the learner control element. It seems that this variable is considered less desirable by most students, and its negative influence may be pervasive enough to determine the total choice of the learning model despite a student's preference for other characteristics. This may result from our system of education, which has not rewarded students who want to control their own learning. The "lock-step" group mode has been ingrained into all who pass through our elementary, secondary, and postsecondary institutions. Most students have survived a system that does not value individual learning experiences and, in fact, is structured to prevent a regular occurrence of such experiences. Students, especially successful ones, have learned to beat a system whose ultimate goals are not expressed as learning objectives, but rather as a relative comparison to peers. The skills for survival in this system are not independence and self-motivation, nor are they necessarily the same skills needed for success in an individualized program.

Students have learned to become passive learners, play the game, and opt for grades instead of learning, generally assuming that the system and not the learner is responsible for "education." Cross (7) describes the "new" students of the 70s, found in large numbers in community colleges, as those who have the "inclination to be passive in learning situations."

Students have typically not controlled their own learning, and many are reluctant to assume control at this stage in their educational careers. Many simply have not learned how to learn. Evidence of this fact is the number of respondents who expressed fear over "independent study," as they termed it, or who wanted firm directions from the teacher at all times, saying, "I learn better being taught."

A second possible reason for students favoring singular characteristics of individualized instruction, but not the model as an entity, may be the negative stereotype that exists regarding this approach. To many students and faculty, individualized instruction implies programmed learning, hardware, an unfamiliar technical vocabulary, and a nonpersonal, non-flexible, noninteractive learning. Although they may prefer certain characteristics of this approach, presentation of the entire model may raise the specter described.

While Heather's definition specifies that individualization includes, but is not limited to, independent learning or a tutor-student dyad, most of the current applications of the concept have not made such distinctions. The idea of individualized instruction has spawned almost single-concept, audio-tutorial laboratories and programmed learning packages that emulate a Skinnerian learning model. These models are imbued with automated devices with which students, moving at their own pace, cover the same sequence of instructional frames using the same media. Group instruction, if provided, is used by the teacher to monitor learning and to provide corrective input where students have not grasped the information. In most cases these "innovations" have replaced the "tradi-

tional" lecture and constitute the only mode of instruction available to the student.

Why has this narrow view of individualized instruction taken hold as the rule rather than the exception? Cohen, in assessing the level and quality of its implementation in two-year colleges, provides some insight:

Differences in environment, student's learning style, instructional methodology, levels of tasks to be learned and interaction among all relevant characteristics have seemed to be beyond comprehension or control (6:134).

It must be concluded, therefore, that given the number and complexity of learner and environmental variables to be considered in providing a truly individualized learning system, the theory far surpasses the level of control possible with the current "state of the art." It would appear that, as a response to this situation, the pragmatic approach of "it works, use it," favored by innovative educators, has prompted them to extract the part of the total individualized instruction model that is most comprehensible and controllable--the self-pacing concept.

Implications for Individualizing Instruction

Instructors have captured the concept of self-pacing through the use of instructional hardware and programmed materials and textbooks. But materials possessing this quality of self-pacing are not synonymous with individualized instruction. Self-paced instruction alone cannot and does not meet the learning needs of all students, no more than traditional modes alone have been sufficient. In the scramble to innovate and to keep in step with contemporary education, the words of such men as Bloom have gone unheeded. Discussing the "educational trap" of assuming there exists one "best" method of instruction, Bloom (4) reminds us that "one may start with the very different assumption that individual students may need very different types and quantities of instruc-

tion to achieve mastery."

The kind of learning environment created by current individualized instructional programs is too frequently ignored, as are student preferences for various learning environments. Individualization recognizes "individual differences" and theoretically takes into consideration the student's present learning level. In practice, most preinstruction assessment focuses exclusively on the level of academic proficiency; little attention is given to how students regard characteristics of the learning environment. While the scientific approach accepts the concept of varieties of learning styles, the individualized approach, in practice, typically places all students in an S-R model learning environment.

The traditional model's structured, external learning environment and undirected methods of assimilation of course materials are substantially different from the unstructured learning environment and directed methods of assimilation of the individualized instructional model. These models place equally different requirements and responsibilities on the students. These differences may not seem paramount and may, in fact, be considered to the student's advantage. However, they do demand a new learning style, one that differs from a previously learned style that has been positively reinforced.

These learning environments differ in another equally important way. Students are accustomed to being taught in a group. They communicate by looks as well as words, and are constantly in contact with each other and the instructor both visually and verbally. Yet, in the individualized environment as it exists in most colleges today, this interaction is reduced. Although it may be intensified when the instructor works with the student on a one-to-one basis, it is not constant. The student working alone with his materials, frequently in an isolated carrell, has little peer interaction. In many respects this learning environment is contrary to the popularity and prevalence of collective action in our society. Hence, the learning style demanded of students who choose

individualized instruction finds little support--and perhaps is even antagonistic to the individual's learning history and life style.

Another assumption basic to the individualized approach that may not be entirely valid is that all students desire or can be motivated to learn. Unfortunately, this simply does not hold true in practice. Cross (7) points out that those who work with the "new" student rank "lack of effort, has quit trying" as the major obstacle to learning . . . rating it above poor home background, poor schooling, or low intelligence.

An additional assumption underlying individualized instruction is that students prefer a system which does not pit one against the other for the ratio of A's and B's dictated by the normal curve. As seen from the student responses, this is not quite true. Some students described in Phase I have obviously come to thrive on competition, and most at least have learned to survive it and to measure their learning against the progress of the class: "if no one knows the material, you don't have to press; if everyone but you knows it, you're in trouble!" Competition is a traditional characteristic of group situations; removing it further modifies the "expected" learning environment.

Many educators have assumed all too simply that individualizing instruction, packaging courses, and specifying behavioral objectives would be a panacea for the problems they face. Unfortunately, this has not been the case. Student reaction to a drastically modified learning environment, which placed greater responsibility on them as learners, has not always been positive.

However, the fact that only 50 per cent of the students sampled selected the individualized model should not comfort its opponents. It suggests that at least half of our students prefer it to a traditional approach. Since few educational institutions offer a variety of courses prepared on the individualized basis, we obviously are not meeting the needs of

many of our students. It is probably appropriate for most institutions, therefore, to emphasize the development of individualized instructional programs rather than to support new efforts along traditional lines. Yet, those who have been anxious to implement this concept are limited by the "state of the art" as to what may realistically be applied in the real world learning environment. As a result, the theory of individualized instruction has far outpaced the ability of educators to put it into effect; but at least it has awakened the education community to the need.

If institutions want a truly individualized instructional program, they may turn to an alternative suggested by Bruner (5) to offset the gap between theory and execution. It suggests using two of the basic precepts of the theoretical model of individualized instruction--offering alternative learning paths and placing the control for selection of learning paths and pace with the student. Lecture and discussion sessions, live and machine media, permissive and highly structured environments--all must be employed because today only the learner can (hopefully) know when and how he is ready to learn a particular concept. Cohen (6), in reinforcing this idea, argues that "although even he is often unconscious of his readiness to learn, the student must be free to move in and out of instructional situations at his discretion and without penalty; furthermore these situations must be varied."

If individualized instruction is to succeed, a total reeducation process must both precede and accompany the process. Negative stereotypes of "programmed learning" held by both faculty and students must be overcome. The materials and techniques developed must truly be multifaceted and offer different paths to accommodate distinct learning styles. We must be as cognizant of the variety of learning environments as we are of the learning materials and techniques. Individualized instruction must be viewed as an all-encompassing concept, and what has been termed "traditional instruction" viewed as but one subset of the many contained in this larger

set.

Finally, we must recognize that individualizing instruction is not synonymous with providing individualized materials, but means meeting the specific learning needs of each student. Achieving this goal may require not only different materials and techniques, but different types of instructors and learning environments, group and individual.

BIBLIOGRAPHY

1. Ashmus, M., and Haigh, G. "Some Factors which may be associated with Student Choice between Directive and Non-directive Classes." American Psychologist 7 (1952). (abstract)
2. Bernstein, Edgar. Independent Learning Project, Final Report 1967-1969. Chicago: U. of Chicago Press, 1969.
3. Bigelow, G., and Eghert, R. "Personality Factors and Independent Study." Journal of Educational Research 62 (1968).
4. Bloom, B.S. "Learning for Mastery, Evaluation Comment 1." Center for the Study of Evaluation of Instructional Programs, UCLA, May 1968.
5. Bruner, J.S. Toward a Theory of Instruction. Cambridge, Mass: Harvard U. Press, 1966.
6. Cohen, A.M. Dateline '79: Heretical Concepts for the Community College. Beverly Hills, Calif.: Glencoe Press, 1969.
7. Cross, K.P. "New Students of the 70's." The Research Reporter 6:4 (1971).
8. Davis, J.B., Jr. "An Investigation of the Interaction of Certain Instructional Strategies with the Structure of Basic Mental Abilities in the Learning of Some Mathematical Operations." Unpublished doctoral dissertation, Florida State U., 1967.
9. Doty, B.A., and Doty, L.A. "Programmed Instructional Effectiveness in Relation to Certain Student Characteristics." Journal of Educational Psychology 55 (1964).
10. Glaser, R. "The Education of Individuals" (working paper no. 12). University of Pittsburgh Learning R & D Center, 1966.
11. Heathers, G. "A Definition of Individualized Education." Paper presented to the annual meeting of the American Educational Research Association, New York, 1971.
12. Jacob, P.E. Changing Values in College. New York: Harper & Row, 1957.
13. Kight, H.R., and Sassenrath, J.M. "Relationship of

Achievement Motivation and Test Anxiety to Performance on Programmed Instruction." Journal of Educational Psychology 57 (1966).

14. Kropp, R.P.; Nelson, W.H.; and King, F.J. Identification and Definition of Subject Matter content Variables related to Human Aptitudes. Final Report, U.S. Office of Education #OE 5-10-297, January 1967.
15. Lublin, S.C. "Reinforcement schedules, scholastic aptitude, autonomy need, and achievement in a programmed course." Journal of Educational Psychology 56 (1965).
16. Macomber, F.G., and Siegel, L. "Experimental Study in Instructional Procedures, Progress Report No. 1." Oxford, Ohio: Miami U., 1956.
17. Majer, K. "Differential Relationships between Personality and Performance under Dissimilar Modes of Instruction." AV Communication Review 18:2 (1970). (1970).
18. Wispe, L.G. "Evaluating Section Teaching Methods in the Introductory Course." Journal of Educational Research 45 (1951).
19. Woodruff, A.B.; Faltz, C.; and Wagner, D. "Effects of Learner Characteristics on Programmed Learning Performance." Psychology in the Schools 3 (1966).

Dear Student:

The course in which you are planning to enroll will be taught in two different ways this semester. The teacher will be the same in both cases. You may enroll in whichever of the two sections you desire. Please read the descriptions of both options carefully and then indicate your choice.

OPTION A

1. The student will work primarily on his own using individualized materials. He will occasionally work with small groups and/or with the course instructor on a one to one basis.
2. The student will proceed at his own pace as determined by his ability to master specific tasks. This pace will vary from student to student.
3. A major portion of the required course work will be done on campus using the individualized materials. The time required to complete the material will vary. Outside work, primarily in the form of reading, will be expected.
4. Exams will be given at the end of each of the 12 course units. A student may take the exams when he feels sufficiently prepared. A final and a course paper will also be required.
5. Grades will be based upon the student's achieving specified course objectives (including a course paper). Grades of A or B will be assigned when the student demonstrates mastery of the knowledge and skills required by the stated course objectives. The duration of the course will vary for each student depending upon his learning speed and ability, it may be more or less than 15 weeks in length.

OPTION B

1. The student will work primarily in a group of 25-30 persons, listening and responding to the instructor lectures.
2. The pace of the course will be adjusted to the group. Students may be required to do more or less work per week depending upon their learning speed in comparison to the class as a whole.
3. The student will meet with the class for 3 hours per week. Additional work, primarily in the form of reading, will be expected outside of class.
4. Three exams, a final and a course paper will be utilized to assess the students progress in the course. The exams will be administered at the completion of the 3rd, 7th, and 11th weeks.
5. Grades will be assigned as based on the student's performance on the above, as compared to his classmates. At the end of 45 hours of instruction (15 weeks) students will receive a grade of either A, B, C, D, or F.

***Which option do you wish to enroll in?

☐ A ☐ B

HARFORD COMMUNITY COLLEGE

NAME _____

1. Which option did you select? ☐ A ☐ B

2. Why did you select this option? _____

3. What grade do you anticipate receiving? (check one)

☐ A ☐ B ☐ C ☐ D ☐ F

4. How would you rate your general ability in this area?
(check one)

☐ Excellent ☐ Good ☐ Fair ☐ Poor

5. What is your major? (write in) _____

6. How old are you? (check one)

☐ 18-21 ☐ 22-25 ☐ 26-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 60+

7. What is your sex? (check one)

☐ M ☐ F

Dear Student:

We are attempting to redesign this course so that you will learn more and will enjoy learning more. Described below are some of the ideas we are considering. They are grouped in eight sets of two each. Would you please read each pair of ideas carefully and then indicate which of the two you would prefer to have incorporated in the design of this course.

1. Would you prefer a course in which: (check one)

☐ the student will work primarily on his own using individualized materials. He will occasionally work with small groups and/or with the course instructor on a one-to-one basis.

or a course in which:

☐ the student will work primarily in a group of 25-30 persons, listening and responding to the instructor's lectures.

2. Would you prefer a course in which: (check one)

☐ the pace of the course will be adjusted to the group. The instructor will make weekly assignments to the class as a whole. Students will be expected to complete these assignments.

or a course in which:

☐ the student will proceed at his own pace as determined by his ability to master specific tasks. This pace will vary from student to student.

3. Would you prefer a course in which: (check one)

☐ a major portion of the required course work will be done on campus using the individualized materials. The time required to complete the material will vary. Outside work, primarily in the form of reading, may be expected.

or a course in which:

☐ the student will meet with the class for 3 hours per week. Additional work, primarily in the form of reading, may be expected outside of class.

4. Would you prefer a course in which: (check one)

☐ three exams, a final and a course paper will be utilized to assess the students' progress in the course. The exams will be administered at the completion of the

3rd, 7th and 11th weeks.

or a course in which:

- ☐ exams will be given at the end of each of the 12 units. A student may take the exams when he feels sufficiently prepared. When a student passes a unit exam at an acceptable level he will proceed to the next unit. A final examination and a course paper will also be required.
-

5. Would you prefer a course in which: (check one)

- ☐ grades will be based upon the student achieving specified course objectives (including a course paper). Grades of A or B will be assigned when the student demonstrates mastery of the knowledge and skills required by the stated course objectives.

or a course in which:

- ☐ grades will be assigned as based on the student's performance as compared to the performance of his classmates. Grades of either A, B, C, D, or F will be assigned.
-

6. Would you prefer a course in which: (check one)

- ☐ the student will be responsible for his own learning and progress and for meeting the stated course objectives.

or a course in which:

- ☐ the student will have to meet certain requirements set by the instructor to maintain satisfactory progress in the course.
-

7. Would you prefer a course in which: (check one)

- ☐ the instructor will be the primary source of information for the students by lecturing and answering questions in a class situation.

or a course in which:

- ☐ the instructor will serve as a resource to the student, assisting them when they run into difficulty and suggesting materials and approaches to aid them in meeting course objectives.
-

8. ☐ Would you prefer a course which would end in 45 hours (15 weeks)

or

- ☐ a course which was completed when a student reached the course objectives, whenever that might be.